

REMARKS/ARGUMENTS

In response to the Examiner's final Office Action of January 29, 2007 the Applicant respectfully submits the accompanying Amendment to the claims and the below Remarks.

Regarding Amendment

In the Amendment:

independent claims 1, 19 and 38 are amended to omit recitation of the heater element being cantilevered and the mass of solid material incorporated therein, and to specify that the heater element has a bubble nucleation section defined about the central axis which has a smaller cross section than the rest of the heater element so that the temperature of the bubble nucleation section is heated to above the boiling point before the rest of the heater element. Support for this amendment can be found, for example, at page 46, line 6-page 47, line 2 of the present specification;

dependent claim 45 is cancelled; and

dependent claims 2-8, 10-18, 20, 22, 24-27, 29-37, 39-44 and 46-54 are unchanged.

It is respectfully submitted that the above amendments do not add new matter to the present application, nor any new issues to the prosecution of the present application.

Regarding Specification Objection

It is respectfully submitted that the above-discussed amendment cancelling claim 45 which recites the subject matter cited by the Examiner as not finding antecedent basis in the specification, provides the correction required by the Examiner.

Regarding 35 USC 103(a) Rejections

It is respectfully submitted that the subject matter of above-discussed amended independent claims 1, 19 and 38, and claims 2-8, 10-18, 20, 22, 24-27, 29-37, 39-44 and 46-54 dependent therefrom, is not taught or suggested by any one or more of previously cited Silverbrook, De Moor, Moon, Anagnostopoulos, Otsuka and Campbell in view of newly cited Kubby (US 5,851,412), for at least the following reasons.

As discussed above, independent claims 1, 19 and 38 have been amended to recite the bubble nucleation section 158 of the heater element 10 which is defined about the central axis with a smaller cross section than the rest of the heater element, as illustrated in Figs. 73 and 74 of the present application. In this way, the temperature of the bubble nucleation section is heated to above the boiling point before the rest of the heater element, thereby enabling control over the growth of the bubble and therefore over the trajectory of the subsequently ejected drop. Further, the specific configuration of the bubble nucleation section reduces thermal expansion effects (see page 46, line 6-page 47, line 2 of the present specification).

None of Silverbrook, De Moor, Moon, Anagnostopoulos, Otsuka, Campbell and Kubby teach or suggest sectioning the disclosed heater elements into such a bubble nucleation section.

It is respectfully submitted that all of the Examiner's objections and rejections have been traversed. Accordingly, it is submitted that the present application is in condition for allowance and reconsideration of the present application is respectfully requested.

Very respectfully,

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